



NUCLEAR REGULATORY COMMISSION

10 CFR Part 26

RIN 3150-AF12

[NRC-2009-0090]

Fitness-for-Duty Programs

AGENCY: Nuclear Regulatory Commission.

ACTION: Rulemaking activity; discontinuation.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) is discontinuing a rulemaking activity that would have amended its regulations governing fatigue management programs for nuclear power plant workers. The purpose of this action is to inform members of the public that this rulemaking activity is being discontinued and to provide a discussion of the NRC's decision to discontinue it.

DATES: As of **[INSERT DATE OF PUBLICATION IN THE *FEDERAL REGISTER*]**, the rulemaking activity is discontinued.

ADDRESSES: Please refer to Docket ID NRC-2009-0090 when contacting the NRC about the availability of information for this action. You may obtain publicly-available information related to this action by any of the following methods:

- **Federal Rulemaking Web Site:** Go to <http://www.regulations.gov> and search for Docket ID NRC-2009-0090. Address questions about NRC dockets to Carol Gallagher; telephone: 301-415-3463; e-mail: Carol.Gallagher@nrc.gov. For technical questions, contact the individual listed in the FOR FURTHER INFORMATION CONTACT section of this document.

- **NRC's Agencywide Documents Access and Management System (ADAMS):** You may obtain publicly-available documents online in the ADAMS Public Document collection at <http://www.nrc.gov/reading-m/adams.html>. To begin the search, select "ADAMS Public Documents" and then select "Begin Web-based ADAMS Search." For problems with ADAMS,

please contact the NRC's Public Document Room (PDR) reference staff at 1-800-397-4209, 301-415-4737, or by e-mail to pdr.resource@nrc.gov. For the convenience of the reader, instructions about obtaining materials referenced in this document are provided in the "Availability of Documents" section.

- **NRC's PDR:** You may examine and purchase copies of public documents at the NRC's PDR Room O1-F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852.

FOR FURTHER INFORMATION CONTACT: Stewart Schneider, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, telephone: 301-415-4123, e-mail: Stewart.Schneider@nrc.gov.

SUPPLEMENTARY INFORMATION:

I. Background

On March 31, 2008, the NRC issued a final rule that substantially revised its regulations for fitness-for-duty programs in part 26 of Title 10 of the *Code of Federal Regulations* (10 CFR), "Fitness for Duty Programs." The 2008 final rule established 10 CFR part 26, subpart I, "Managing Fatigue," to require that nuclear power plant licensees provide reasonable assurance that the effects of worker fatigue are managed commensurate with maintaining public health and safety. The regulations in 10 CFR part 26 require licensees to manage worker fatigue at reactors that are operating or under construction (no later than the receipt of special nuclear material in the form of fuel assemblies), for all individuals who are granted unescorted access to protected areas of the plant. The regulations also require licensees to control the work hours of those individuals whose work activities have the greatest potential to adversely affect public health and safety or the common defense and security if their performance is degraded by fatigue (e.g., licensed operators, maintenance technicians, security officers).

The Commission's staff requirements memorandum (SRM), SRM-SECY-06-0244, "Final Rulemaking--10 CFR Part 26--Fitness-for-Duty Programs," approving the 2008 final rule directed the NRC staff to ensure that personnel who actually perform independent quality control/quality verification (QC/QV) checks under the licensee's NRC-approved Quality Assurance Program are subject to the same 10 CFR part 26, subpart I, provisions as operating personnel defined in § 26.4(a)(1). The SRM also directed the NRC staff to publish the final rule without the QC/QV provision, if the staff determined that its inclusion would require re-notice and comment under the Administrative Procedure Act of 1946.

Because the NRC staff determined that including the QC/QV provision would require re-noticing of the rule to provide a new opportunity for public comment, the NRC issued the final rule without imposing work hour controls on individuals performing QC/QV activities.¹ As directed in the SRM, the NRC staff initiated a new proposed rulemaking to apply the work hour controls for operating personnel to the QC/QV-dedicated personnel who perform QC/QV checks.²

On September 10, 2012, the NRC published the regulatory basis and preliminary proposed rule language in support of the QC/QV proposed rulemaking. Because the documents were made publicly available to provide preparatory material for discussion in future public meetings, a public comment period was not initiated.

The NRC staff held multiple public meetings between December 2011 and February 2014 to discuss the QC/QV rulemaking and other potential changes to 10 CFR part 26, subpart I. The meetings were attended by members of the nuclear power reactor community, organized labor, contractors, and the media. Summaries of these meetings

¹ The QC/QV activities are a part of the planned and systematic actions under a licensee's quality assurance program that are necessary to provide adequate assurance that a safety-related structure, system, and component will perform satisfactorily in service. The QC/QV inspections are a subset of the QC/QV activities.

² "QC/QV-dedicated personnel" means individuals who perform QC/QV activities and are not otherwise subject to the work hour controls in 10 CFR part 26, subpart I.

are publicly available at <http://www.regulations.gov> under Docket ID NRC-2009-0090.

II. Petitions for Rulemaking

The NRC received petitions for rulemaking (PRMs) regarding 10 CFR part 26, subpart I, from the Professional Reactor Operator Society (PROS), the Nuclear Energy Institute (NEI), and Mr. Erik Erb following issuance of the 2008 final rule.

In the SRM to SECY-11-0003/0028, “Status of Enforcement Discretion Request and Rulemaking Activities Related to 10 CFR Part 26, Subpart I, ‘Managing Fatigue’ and Options for Implementing an Alternative Interim Regulatory Approach to the Minimum Days Off Provisions of 10 CFR Part 26, Subpart I, ‘Managing Fatigue,’” the Commission directed the NRC staff to address these PRMs in a rulemaking effort separate from the alternative to the minimum days off (MDO) rulemaking. The scope of the alternative MDO rulemaking was limited solely to providing an alternative to the then-current requirements for minimum days off in 10 CFR part 26, subpart I. This rulemaking provided a new requirement for working a 54-hour per week average over a rolling period of up to 6 weeks.

On May 16, 2011, the NRC published three documents in the *Federal Register* (one for each PRM) informing the public that the issues raised in each PRM would be considered in the planned QC/QV rulemaking. The three PRMs are discussed below.

(1) PRM-26-3 Submitted by Robert N. Meyer on Behalf of PROS

Robert N. Meyer on behalf of PROS, an organization of operations personnel employed at nuclear power plants throughout the United States, submitted a PRM dated October 16, 2009. The petitioner requested that the NRC change the term “unit outage” to “site outage” in 10 CFR part 26 and that the definition of “site outage” read “up to 1 week prior to disconnecting the reactor unit from the grid and up to 75-percent turbine power following

reconnection to the grid.” The NRC published a notice of receipt of, and request for public comment on, the PRM on November 27, 2009. The public comment period ended on February 10, 2010, and the NRC received 4 comment letters from NEI, nuclear power plant operators and managers, and a private citizen. The comments generally supported the petition.

(2) PRM-26-5 Submitted by Anthony R. Pietrangelo on Behalf of NEI

Anthony R. Pietrangelo on behalf of NEI, a nuclear power industry trade association, submitted a PRM dated September 3, 2010. The petitioner requested that the NRC amend its regulations regarding fitness-for-duty programs to refine existing requirements based on experience gained since the regulations were last amended in 2008. The NRC published a notice of receipt of, and request for public comment on, the PRM on October 22, 2010. The public comment period ended on January 5, 2011, and the NRC received 39 comment letters from corporations, professional organizations, and private citizens. Of these 39 comment letters, 11 specifically voiced support for the petition, while 13 voiced opposition. Those comment letters that voiced neither support for nor opposition to the petition itself discussed a diverse range of perspectives on the fatigue management provisions contained in 10 CFR part 26, subpart I.

(3) PRM-26-6 Submitted by Erik Erb and 91-co-signers

Erik Erb and 91 co-signers submitted a PRM dated August 17, 2010. The NRC published a notice of receipt of, and request for public comment on, the PRM on November 23, 2010. The petitioner requested that the NRC amend its fitness-for-duty regulations to decrease the minimum days off requirement from an average of 3 days per week to 2.5 or 2 days per week for security officers working 12-hour shifts. The public comment period ended on February 7, 2011, and the NRC received 5 comment letters from corporations, professional organizations, and private citizens. The comments generally

supported the petition.

III. Rulemaking Discontinuation

In SECY-15-0074, “Discontinuation of Rulemaking Activity—Title 10 of the *Code of Federal Regulations* Part 26, Subpart I, Quality Control and Quality Verification Personnel in Fitness for Duty Program,” the NRC staff requested Commission approval to discontinue the QC/QV rulemaking. This request was based on the following factors: 1) QC/QV inspections are most often performed by maintenance personnel who are already covered by the work hour controls in 10 CFR part 26, subpart I; 2) the few remaining inspections are performed by a small number of QC/QV-dedicated personnel; and 3) backfitting³ the 10 CFR part 26, subpart I, work hour controls to the QC/QV-dedicated personnel would not result in a substantial increase in the overall protection of the public health and safety or common defense and security.

In the SRM to SECY-15-0074, the Commission approved the NRC staff’s request to discontinue the QC/QV rulemaking activity. The Commission directed the NRC staff to inform the public that the NRC is no longer pursuing rulemaking in this area and that the three PRMs will be addressed in a separate action.

IV. Public Comments Outside the Scope of the Alternative to the Minimum Days Off Proposed Rule

On April 26, 2011, the NRC published a proposed rule to provide licensees with an option for managing cumulative fatigue that differed from the minimum days off requirements in § 26.205(d)(3) (76 FR 23208). The NRC received two comment submissions from private

³ 10 CFR 50.109, “Backfitting.”

citizens on the proposed rule that were determined to be outside of the scope of that limited rulemaking activity. The Commission had previously directed the NRC staff in SRM-SECY-11-0003/0028 to consider in a separate rulemaking activity any comments on the alternative MDO proposed rule that were determined to be outside the limited scope of the rulemaking. Therefore, the *Federal Register* notice for the final rule stated that public comments outside of the scope of the proposed rule would be considered in the QC/QV rulemaking (76 FR 43534, 43540; July 21, 2011). Because the QC/QV rulemaking is being discontinued, the NRC's responses will be provided here.

Comment: One commenter remarked that some duties do not require constant surveillance, so the individuals performing these duties should not be subject to the fatigue management requirements. The commenter also stated that it is more important to have a qualified person performing a task than it is to ensure that the person performing the task complies with the work hour controls. According to the commenter, the fatigue management requirements are too complex and do not guarantee that an individual subject to the work hour requirements will diligently perform his or her duties.

NRC Response: The NRC agrees in part and disagrees in part with the comment. The NRC has consistently held that work conducted within the protected area of a nuclear power plant is of such safety significance that individuals granted unescorted access to those protected areas must be fit for duty, including management of the effects of cumulative and acute fatigue. However, the NRC recognizes the functions that individuals within different job categories perform differ in their potential impact on plant safety and security. Therefore, the NRC has identified specific categories of individuals in § 26.4 who require additional work hour controls due to their job function. This graded approach provides the maximum flexibility for nuclear power plant licensees and individuals while providing reasonable assurance that those individuals granted unescorted access to the protected areas of nuclear power plants are fit to safely and competently perform their duties free from the adverse effects of cumulative and

acute fatigue.

Further, the NRC has neither proposed nor finalized fatigue management regulations that require nuclear power plant licensees to choose between having a qualified individual perform a task or having a well-rested individual perform a task. For circumstances outside the licensee's reasonable control in which the potential for such a choice exists, § 26.207, "Waivers and exceptions," establishes specific conditions in which licensees may waive or exclude personnel from the work hour controls. In addition, licensees have the option to provide an escort to individuals who may be needed for a short period in unusual situations without subjecting them to the work hour controls. On a day-to-day basis, however, licensees need to ensure that personnel meet the applicable qualification requirements for the tasks they are assigned to perform and are fit for duty.

The NRC also disagrees that the fatigue management requirements of 10 CFR part 26, subpart I, including the voluntary alternative to the MDO provisions in § 26.205(d)(3), are too complex. The NRC acknowledges that there are significant administrative requirements that are part of the fatigue management regulations. However, the NRC has sought out opportunities to relieve administrative burden where possible while still maintaining the performance objectives of the rule. For example, the voluntary alternative to the MDO provisions in § 26.205(d)(3) provides a significant reduction in administrative burden as it permits nuclear power plant licensees to manage cumulative fatigue by limiting an individual's work hours to an average of not more than 54-hours per week over a 6-week rolling period.

The NRC agrees, however, that compliance with the fatigue management provisions of 10 CFR part 26, subpart I, does not guarantee that an individual subject to the work hour requirements will diligently perform his or her duties. As stated in the statement of considerations for the 2008 part 26 final rule, compliance with the work hour requirements alone will not ensure proper fatigue management. It remains the responsibility of licensees and

individuals granted unescorted access to nuclear power plants to ensure that individuals subject to the fatigue management provisions of 10 CFR part 26, subpart I, are properly rested to safely and competently perform their duties.

Comment: One commenter claimed that the 10 CFR part 26, subpart I, work hour controls do not reduce worker fatigue during outages but can increase fatigue during outages. Specifically, the commenter noted that when an individual works a backshift (i.e., night shift) schedule during outages, taking a 1-day break disrupts that person's sleep pattern. Recovery from this disruption takes several days, therefore inducing fatigue. The commenter concluded that once a person adjusts to the unnatural sleep pattern of the night shift, it is far better to continue that pattern for the duration of the outage. The commenter also stated that the rule has caused a drop in his earnings.

NRC Response: The NRC agrees in part with the comment. Under circumstances postulated by the commenter (i.e., a 1-day break during consecutive night shifts), the adjustment of an individual's sleep-wake cycle to night shift can be affected by cues that influence the sleep-wake cycle, such as exposure to bright sunlight. However, the break and day off requirements of 10 CFR part 26, subpart I, are minimum requirements (i.e., they do not require a schedule that provides only 1-day off during consecutive night shifts, as described by the commenter), and they are not limited to serve as a means for establishing shift schedules. As stated in Section 2.3.5 of NUREG-1912, "Summary and Analysis of Public Comments Received on Proposed Revisions to 10 CFR Part 26 – Fitness for Duty Program," the NRC intends that the maximum work hour and minimum break and day off requirements that are specified in § 26.205(d) be applied to infrequent, temporary circumstances. They should not be used as guidelines or limits for routine work scheduling. In addition, the § 26.205(d) work hour controls do not address several elements of routine schedules that can significantly affect worker fatigue. These include shift length, the number of consecutive shifts, the duration of breaks between blocks of shifts, and the direction of shift rotation. Therefore, § 26.205(c)

requires licensees to schedule personnel consistent with preventing impairment from fatigue from these scheduling factors, including periods of high workload during outages.

The rule requires licensees to address scheduling factors, because human alertness and the propensity to sleep vary markedly through the course of a 24-hour period. These circadian variations are the result of changes in physiology outside the control of the individual. Work, with the consequent timing of periods of sleep and wakefulness, may be scheduled in a manner that either facilitates an individual's adaptation to the work schedule or challenges the individual's ability to get adequate rest. Therefore, the duration, frequency, and sequencing of shifts, particularly for personnel who work rotating shifts, are critical elements of fatigue management. The importance of these elements for fatigue management is reflected in guidelines for work scheduling, such as the Electric Power Research Institute's report, EPRI-NP-6748, "Control-Room Operator Alertness and Performance in Nuclear Power Plants," and in technical reports, such as the NRC's NUREG/CR-4248, "Recommendations for NRC Policy on Shift Scheduling and Overtime at Nuclear Power Plants," and the Office of Technology Assessment's report, OTA-BA-463, "Biological Rhythms: Implications for the Worker." Although research provides clear evidence of the importance of these factors in developing schedules that support effective fatigue management, the NRC also recognizes that the complexity of effectively addressing and integrating each of these factors in work scheduling decisions precludes a prescriptive requirement. Therefore, § 26.205(c) establishes a non-prescriptive, performance-based requirement that also applies to shift scheduling during outages.

Further, the NRC disagrees that the requirements of 10 CFR part 26, subpart I, have resulted in a pay cut for the commenter and notes that the work hour requirements require licensees to manage fatigue, in part, by limiting work hours, not compensation. Furthermore, the work hour controls provide licensees with a significant amount of flexibility when establishing

schedules, and those work hour controls continue to allow for overtime. One objective of the NRC's fitness-for-duty program is to "provide reasonable assurance that the effects of fatigue and degraded alertness on individuals' abilities to safely and competently perform their duties are managed commensurate with maintaining public health and safety." Therefore, the NRC's focus and mission is on safety, not compensation and wages.

V. Availability of Documents

The documents identified in the following table are available to interested persons as indicated.

DOCUMENT	ADAMS ACCESSION NO. / FEDERAL REGISTER NOTICE / WEB LINK
U.S. Nuclear Regulatory Commission, NUREG/CR-4248 (PNL-5435), "Recommendations for NRC Policy on Shift Scheduling and Overtime at Nuclear Power Plants" (July 1985).	ML102520362
Electric Power Research Institute, EPRI-NP-6748, "Control-Room Operator Alertness and Performance in Nuclear Power Plants" (March 1, 1990).	http://www.epri.com/abstracts/Pages/ProductAbstract.aspx?ProductId=NP-6748
U.S. Congress, Office of Technology Assessment, OTA-BA-463, "Biological Rhythms: Implications for the Worker" (September 1991).	https://www.princeton.edu/~ota/disk1/1991/9108/9108.PDF
Staff Requirements—SECY-06-0244—Final Rulemaking—10 CFR Part 26—Fitness-for-Duty Programs (April 17, 2007).	ML071070361
Fitness for Duty Programs; Final rule (March 31, 2008).	73 FR 16966
PRM-26-3, Petition to Amend 10 CFR part 26, "Fitness-for-Duty Programs," filed by the Professional Reactor Operator Society, Docket ID NRC-2009-0482 (October 16, 2009).	ML092960440
Professional Reactor Operator Society; Notice of Receipt of Petition for Rulemaking [Docket No. PRM-26-3; NRC-2009-0482] (November 27, 2009).	74 FR 62257
PRM-26-6, Petition to Amend 10 CFR part 26, "Fitness-for-Duty Programs," filed by Erik Erb,	ML102630127

Docket ID NRC-2010-0310 (August 17, 2010).	
PRM-26-5, Petition to Amend 10 CFR part 26, "Fitness-for-Duty Programs," filed by the Nuclear Energy Institute, Docket ID NRC-2010-0304 (September 3, 2010).	ML102590440
Anthony R. Pietrangelo on Behalf of the Nuclear Energy Institute; Notice of Receipt of Petition for Rulemaking [Docket No. PRM-26-5; NRC-2010-0304] (October 22, 2010).	75 FR 65249
Erik Erb; Notice of Receipt of Petition for Rulemaking [Docket No. PRM-26-6; NRC-2010-0310] (November 23, 2010).	75 FR 71368
U.S. Nuclear Regulatory Commission, NUREG-1912, "Summary and Analysis of Public Comments Received on Proposed Revisions to 10 CFR Part 26 – Fitness for Duty Programs" (Comments received between August 26, 2005 and May 10, 2007) (December 2010).	ML110310431
Staff Requirements—SECY-11-0003—Status of Enforcement Discretion Request and Rulemaking Activities Related to 10 CFR Part 26, Subpart I, "Managing Fatigue" and SECY-11-0028—Options for Implementing an Alternative Interim Regulatory Approach to the Minimum Days Off Provisions of 10 CFR Part 26, Subpart I, "Managing Fatigue" (March 24, 2011).	ML110830971
Petition for Rulemaking Submitted by the Professional Reactor Operator Society; Petition for rulemaking consideration in the rulemaking process [Docket No. PRM-26-3; NRC-2009-0482] (May 16, 2011).	76 FR 28192
Petition for Rulemaking Submitted by the Nuclear Energy Institute; Petition for rulemaking consideration in the rulemaking process [Docket No. PRM-26-5; NRC-2010-0304] (May 16, 2011).	76 FR 28192
Petition for Rulemaking Submitted by Erik Erb and 91 Cosigners; Petition for rulemaking consideration in the rulemaking process [Docket No. PRM-26-6; NRC-2010-0310] (May 16, 2011).	76 FR 28191
Comments of Mr. Harry Sloan [Docket ID NRC-2011-0058] (May 22, 2011).	ML11144A157
Comments of Mr. Mark Callahan [Docket ID NRC-2011-0058] (May 25, 2011).	ML11146A110
SECY-15-0074, Discontinuation of Rulemaking Activity—Title 10 of the Code of Federal Regulations Part 26, Subpart I, Quality Control and Quality Verification Personnel in Fitness for Duty Program (May 19, 2015).	ML15084A092

Staff Requirements—SECY-15-0074— Discontinuation of Rulemaking Activity—Title 10 of the Code of Federal Regulations Part 26, Subpart I, Quality Control and Quality Verification Personnel in Fitness for Duty Program (July 14, 2015).	ML15195A577
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VI. Conclusion

The NRC is discontinuing the QC/QV rulemaking activity for the reasons previously stated. This rulemaking will no longer be reported in the NRC’s portion of the Unified Agenda of Regulatory and Deregulatory Actions. Should the NRC determine to pursue rulemaking in this area in the future, NRC will inform the public through a new rulemaking entry in the Unified Agenda. While the three notices in the *Federal Register* published on May 16, 2011, stated that the PRM dockets are closed, the NRC will issue a subsequent action on the determination of these PRMs.

Dated at Rockville, Maryland, this 19th day of November, 2015.

For the Nuclear Regulatory Commission.

/RA/

Victor M. McCree,
Executive Director for Operations.

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